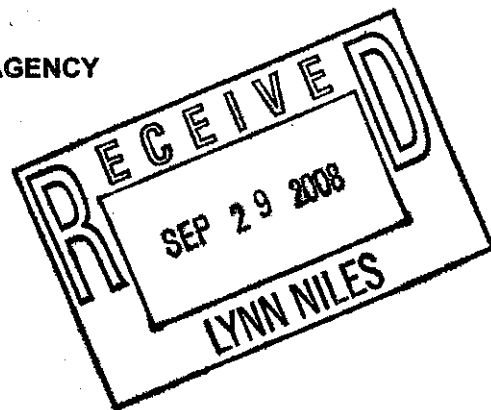




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866



SEP 25 2008

Ms. Mary Lou Capichioni
Director
Remediation Services
Corporate Environmental Services
The Sherwin-Williams Company
101 Prospect Avenue, N.W.
Cleveland, OH 44115-1075

Re: *Sediment Sample Collection for SEM/AVS Analysis* (October 12, 2006)
Sherwin-Williams Sites
AOC Index Number: No. II CERCLA-02-99-2035
Gibbsboro Borough, Voorhees Township and Lindenwold Borough, New Jersey

Dear Ms. Capichioni:

The United States Environmental Protection Agency (EPA) has reviewed the October 12, 2006 (proposed sampling plan for) *Sediment Sample Collection for SEM/AVS Analysis* (within Hilliards Creek) submitted to EPA by The Sherwin-Williams Company (SWC). EPA offers the following comments on the October 12, 2006 submittal; in addition, comments by the New Jersey Department of Environmental Protection (NJDEP) are incorporated.

1. The draft submittal proposes the collection of 16 sediment samples from Hilliard Creek (with a range of lead and total organic carbon concentrations) for simultaneously extracted metals/acid volatile sulfides (SEM/AVS) analysis. Please note, additional samples should also be collected and analyzed for TAL metals and total organic carbon (TOC). The rationale for SEM/AVS analysis is to assist in determining the bio-availability of certain metals (i.e., lead, copper, cadmium, zinc, and nickel). It should be noted that due to uncertainties associated with this analysis, SEM/AVS results should not substitute for the following: bulk sediment chemical analyses; toxicity tests; benthic macroinvertebrate surveys; and/or tissue bioassays when assessing sediment quality – however, SEM/AVS results may aid in interpretation of these studies.

While AVS is effective in binding divalent metals in anoxic sediments, it is generally less applicable to the more oxic conditions in the upper 2 cm of sediments, considered the primary biotic zone (benthic organisms require oxygen and would not be present in its absence). Additionally, use of the SEM/AVS approach requires that the sediments are never disturbed or changed from the parameters examined to make the ratio calculations. Therefore the method's ability to predict toxicity is limited and there are uncertainties associated with seasonality, temperature and pH. Flood events, excavation, etc., may cause sediment disturbance and volatile sulfide oxidation, potentially resulting in the release of a "slug" of metals to the environment.

cc: Lynn Arabia, Foster Wheeler Environmental
John Doyon, NJDEP